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REPLY TO TRENTON OFFICE

November 10, 2000

Honorable Commissioner of Patents
Washington, D.C. 20231

Re: Patent Application; Improved Bleacher Chair and Vending System
Our File No. 2154/4/00

Dear Sirs:

Enclosed herewith for filing are the following:

1. Patent Application for U.S. Letters Patent and Drawings.
2. Combined Declaration and Power of Attorney in Original Application.
3. Verified Statement Claiming Small Entity Status.
4. Form 1449.
6. Copies of Prior Art.
7. Filing Fee Check for \$355.00.
8. Postcard to be returned to us.

Very truly yours,

William Lawrence Muckelroy, Esq.

Registration No. 26,961

:jm

Enclosures: Application and Drawings; Declaration and Power of Attorney; Verified
Statement Claiming Small Entity Status; Form 1449; Copies of Prior Art;
Check for \$345.00; Postcard

cc: Thomas and Rosetta Mason

Applicants or Patentees: Thomas Mason and Rosetta Mason

Serial or Patent No.: Attorney's Docket No. 2125/4/00

Filed or Issued: _____

For: Improved Bleacher Chair and Vending System

VERIFIED STATEMENT [DECLARATION] CLAIMING SMALL ENTITY
STATUS [37 CFR 1.9(f) AND 1.27(b)] - INDEPENDENT INVENTORS

As the below named inventors, we hereby declare that we qualify as independent inventors as defined in 37 CFR 1.9 (c) for purposes of payment of reduced fees under section 41(a) and (b) of Title 35, United States Code, to the Patent and Trademark Office with regard to the invention entitled Improved Bleacher Chair and Vending System described in

- (x) the specification filed herewith
() application serial no. _____ ()
patent no. _____, issued _____

We have not assigned, granted, conveyed or licensed and are under no obligation under contract or law to assign, grant, convey or license, any rights in the invention to any person who could not be classified as an independent inventor under 37b CFR 1.9(c) if that person had made the invention, or to any concern which would not qualify as a small business concern under 37b CFR 1.9(d) or a nonprofit organization under 37 CFR 1.9(e).

Each person, concern or organization to which we have assigned, granted, conveyed, or licensed or are under an obligation under contract or law to assign, grant, convey, or license any rights in the invention is listed as follows:

- (x) no such person, concern, or organization
() persons, concerns or organizations listed below.

We acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate [37 CFR 1.28(b)]

We hereby declare that all statements made herein of our own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the patent application filed herewith, any subsequent patent

0976456-11000

Variable	Mean	SD	Min	Max
Age	34.5	10.5	18	65
Gender	1.0	0.0	0	1
Marital status	1.0	0.0	0	1
Education	12.5	1.5	9	16
Income	1.5	0.5	1	2
Health status	1.0	0.0	0	1
Smoking status	1.0	0.0	0	1
Alcohol consumption	1.0	0.0	0	1
Exercise frequency	1.0	0.0	0	1
Stress level	1.0	0.0	0	1
Sleep quality	1.0	0.0	0	1
Appetite	1.0	0.0	0	1
Weight change	1.0	0.0	0	1
Blood pressure	1.0	0.0	0	1
Cholesterol level	1.0	0.0	0	1
Glucose level	1.0	0.0	0	1
Hemoglobin A1c	1.0	0.0	0	1
Insulin sensitivity	1.0	0.0	0	1
Body mass index	1.0	0.0	0	1
Waist circumference	1.0	0.0	0	1
Triglyceride level	1.0	0.0	0	1
HDL cholesterol	1.0	0.0	0	1
LDL cholesterol	1.0	0.0	0	1
Total cholesterol	1.0	0.0	0	1
Heart rate	1.0	0.0	0	1
Blood pressure (systolic)	1.0	0.0	0	1
Blood pressure (diastolic)	1.0	0.0	0	1
Cholesterol (total)	1.0	0.0	0	1
Cholesterol (HDL)	1.0	0.0	0	1
Cholesterol (LDL)	1.0	0.0	0	1
Cholesterol (triglycerides)	1.0	0.0	0	1
Glucose (fasting)	1.0	0.0	0	1
Glucose (HbA1c)	1.0	0.0	0	1
Insulin (fasting)	1.0	0.0	0	1
Insulin (HOMA-IR)	1.0	0.0	0	1
Body mass index (BMI)	1.0	0.0	0	1
Waist circumference (WC)	1.0	0.0	0	1
Triglyceride level (TG)	1.0	0.0	0	1
HDL cholesterol (HDL-C)	1.0	0.0	0	1
LDL cholesterol (LDL-C)	1.0	0.0	0	1
Total cholesterol (TC)	1.0	0.0	0	1
Heart rate (HR)	1.0	0.0	0	1
Blood pressure (systolic) (BP-S)	1.0	0.0	0	1
Blood pressure (diastolic) (BP-D)	1.0	0.0	0	1
Cholesterol (total) (TC)	1.0	0.0	0	1
Cholesterol (HDL) (HDL-C)	1.0	0.0	0	1
Cholesterol (LDL) (LDL-C)	1.0	0.0	0	1
Cholesterol (triglycerides) (TG)	1.0	0.0	0	1
Glucose (fasting) (G-F)	1.0	0.0	0	1
Glucose (HbA1c) (G-H)	1.0	0.0	0	1
Insulin (fasting) (I-F)	1.0	0.0	0	1
Insulin (HOMA-IR) (I-H)	1.0	0.0	0	1
Body mass index (BMI) (BMI)	1.0	0.0	0	1
Waist circumference (WC) (WC)	1.0	0.0	0	1
Triglyceride level (TG) (TG)	1.0	0.0	0	1
HDL cholesterol (HDL-C) (HDL-C)	1.0	0.0	0	1
LDL cholesterol (LDL-C) (LDL-C)	1.0	0.0	0	1
Total cholesterol (TC) (TC)	1.0	0.0	0	1
Heart rate (HR) (HR)	1.0	0.0	0	1
Blood pressure (systolic) (BP-S) (BP-S)	1.0	0.0	0	1
Blood pressure (diastolic) (BP-D) (BP-D)	1.0	0.0	0	1
Cholesterol (total) (TC) (TC)	1.0	0.0	0	1
Cholesterol (HDL) (HDL-C) (HDL-C)	1.0	0.0	0	1
Cholesterol (LDL) (LDL-C) (LDL-C)	1.0	0.0	0	1
Cholesterol (triglycerides) (TG) (TG)	1.0	0.0	0	1
Glucose (fasting) (G-F) (G-F)	1.0	0.0	0	1
Glucose (HbA1c) (G-H) (G-H)	1.0	0.0	0	1
Insulin (fasting) (I-F) (I-F)	1.0	0.0	0	1
Insulin (HOMA-IR) (I-H) (I-H)	1.0	0.0	0	1
Body mass index (BMI) (BMI) (BMI)	1.0	0.0	0	1
Waist circumference (WC) (WC) (WC)	1.0	0.0	0	1
Triglyceride level (TG) (TG) (TG)	1.0	0.0	0	1
HDL cholesterol (HDL-C) (HDL-C) (HDL-C)	1.0	0.0	0	1
LDL cholesterol (LDL-C) (LDL-C) (LDL-C)	1.0	0.0	0	1
Total cholesterol (TC) (TC) (TC)	1.0	0.0	0	1
Heart rate (HR) (HR) (HR)	1.0	0.0	0	1
Blood pressure (systolic) (BP-S) (BP-S) (BP-S)	1.0	0.0	0	1
Blood pressure				

CITIZENSHIP: United States of America

Signature of Inventor

CITIZENSHIP: United States of America

Signature of Inventor

Date: 6-7-, 2000

APPLICATION FOR U. S. LETTERS PATENT

ENTITLED

IMPROVED BLEACHER CHAIR

AND

METHOD OF VENDING SAME

BY

**Thomas Mason
Rosetta Mason
[Joint Inventors]**

[ASSIGNEE: None]

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TITLE OF THE INVENTION: IMPROVED BLEACHER CHAIR AND METHOD
OF VENDING SAME

PRIORITY DATE CLAIMED: None.

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Cross Reference to Related Applications: None

Statement regarding federally sponsored research or development: None

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Background of the Invention

1. Field of the Invention

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The present invention relates to bleacher seating, and in particular, the present invention relates to a bleacher chair for use with a bleacher structure having tiers of bleacher seating. In addition, the present invention relates to vending such bleacher chairs at an event with bleacher seating.

2. Description of Related Art

20

Commercial auditoriums and sports arenas have come to provide comfortable seating for expensive concerts and professional-level sporting events. Local and regional events, such as high school and college football games and other sporting events,

however, have not been able to provide such luxury. Fans at such events are rarely provided with more than bleacher seating, which has typically consisted of little more than rough wooden planks on a metal framework or concrete stands. In recent years, standard aluminum bleachers have replaced such older designs, but have not added appreciably to the comfort provided.

Bleacher seating is almost universally uncomfortable, and often wet and cold, particularly when the bleachers are outdoors. Aluminum seating has, if anything, aggravated the perceived coldness of the seating. Worse, bleacher seating provides no back support whatsoever. For those with even minor back problems, watching an event from bleacher seating can prove to be an uncomfortable, if not painful, experience.

Many stadiums and sports arenas rent pillows and padded seating to patrons, but even where such cushioning is available, the support problems are simply not addressed. For many years, the prior art has attempted to overcome these shortcomings, but with limited success.

Aluminum bent tube lawn chairs with plastic strip webbing are manufactured in large quantities for sale in the U.S. Numerous manufacturing plants exist to manufacture these ubiquitous chairs for perpetual sale in the U. S. and other countries. The manufacturing process is so well defined and so well executed that the cost of making these types of chairs is estimated to be about one or two dollars. Utilization of this manufacturing capacity is a key to rapid deployment of the novel improvement disclosed herein.

Numerous patents have been issued which evidence many attempts to commercialize and mass market a bleacher chair without any significant market

penetration or mass sale of the patented items. For example, some of these patented structures which failed to create a substantial market are as follows:

United States Patent 226,156, issued to Blackler on April 6, 1880. This reference is entitled Window-Chair, and shows a seat or chair provided with arms and a back that can be used by persons when washing windows.

United States Patent 243,617, issued to Porter on June 28, 1881. This reference is entitled Chair for Attaching to Door Steps, and shows a chair or seat adapted to be secured to the curb or side wall of a flight of door-steps, which can be folded compactly for storage or shipment.

United States Patent 720,034, issued to Kerr on February 10, 1903. This reference is entitled Swing Attachment and shows a chair attachment for swings adapted to rope swings with wooden seats and capable of affording a back and footrest and being readily adjusted to accommodate to the person using the swing.

United States Patent 2,528,433, issued to Hines on October 31, 1950. This reference is entitled Portable Folding Seat, and is assigned of record to the W.B. Hines Research and Development Corporation of Ohio. The reference shows a portable, folding seat which may be easily carried by the user and which may be readily clamped in place upon the ordinary seat in stadiums and similar places providing a dry comfortable cushion seat having a back rest thereon.

United States Patent 2,694,441, issued to Degenfelder on November 16, 1954. This reference is entitled Portable Seat, and shows a portable seat that is equipped with a back collapsible below the seat and collapsible means for securely attaching the seat to a bench.

United States Patent 3,167,790, issued to Hickey on February 2, 1965. This reference is entitled Invalid Bed Seat, and shows a seat portion for a chair that can be positioned under a bed-ridden patient and used to move the patient. The patient can be raised to a sitting position and a removable backrest attached to the seat portion.

5 United States Patent 3,405,972, issued to Morris on October 15, 1968. This reference is entitled Stair Chair, and shows a chair having left and right hand leg braces of different lengths so that the chair can be placed on a flight of stairs to permit the user to sit facing a banister with the user's feet on either of two steps upon which the chair is mounted. The chair is collapsible, and can be locked in its erected condition and held in
10 sockets provided therefore on a wall opposite the banister.

United States Patent 4,842,329 was issued to Owen on June 17, 1989 for a portable, foldable seating device having a seat and backrest pivotally connected to one another. A U-shaped support is pivotally attached to the seat and in a stored position the
15 back and seat engage in a generally parallel abutting relationship with the support extending to provide a carrying handle. In the use-position as a seat, the support secures the back in a generally vertical position with respect to the seat. The seat may be used with the backrest upright on a relatively flat surface or may be inverted with the backrest serving as a support leg and the bottom of the cushion upwardly facing to provide a
20 seating surface on an incline or hillside.

United States Patent 5,326,152 was issued to Baron on July 5, 1994 for a cover for a folding lawn chair provided to allow a person to conveniently carry the folding lawn chair as well as to increase comfort when the person is using the lawn chair. The cover

may include an enveloped or flapped portion on each end into which each end of the lawn chair can be situated. The cover thus remains in position on the lawn regardless of wind and movement by the user. The cover further includes a strap to accommodate convenient carrying of the lawn chair. The cover may finally include a pillow positioned at the head

5 portion of the cover, a pocket for carrying magazines and other accessories, and an insulated receptacle for carrying and holding beverages such as soda and beer.

United States Patent 5,516,193 was issued to Simpson on May 14, 1996 for a portable stadium seat apparatus and is comprised of an apparatus designed to be used at spectator events where the seating is flat benches without backs. The apparatus consists,

10 in one embodiment, of a streamlined fabric unit which folds readily into a compact flat pad or rolls up to fit a pocket while providing a padded seat and a vertical back support portion. The more detailed embodiment is a multi-compartment shoulder bag having a similar padded seat and a vertical back support portion and a storage compartment which extends from the seat when the unit is in position on the bench, and a storage

15 compartment which is behind the backrest when the unit is in position. The webbing is attached to a hook that secures the seat to the front edge of the bench. The webbing goes across the bench and over the back edge. A compression member is inserted into a pocket in the webbing to form a rear edge for the seat at the back of the bench. Pressure from the compression member wraps the seat snugly over the back of the bench, adjusting it in so

20 doing to any standard bench. The compression member extends vertically to the top of the back of the seat and is attached thereto. Adjustment devices are attached to the webbing to permit the user to adjust the angle of the backrest.

United States Patent 5,829,837 was issued to Reiersen on November 3, 1998 for a portable back and arm support device for use on a bleacher-type bench seat which incorporates a simple back support and two arm supports hingedly connected to the back support. Each arm support may be folded inward so that each arm support is in a parallel relationship with the back support as well as with each other in a tight, transportable arrangement, or each arm support may be folded outward in its operation position so that each arm support is in a somewhat perpendicular relationship with the back support. Each arm support contains a unique fulcruming arrangement which allows the arm supports to constrict, thereby attaching to, or "grasping" onto a bench-type seat by fastening to the mere edges of such bench-type seat.

Summary of the Invention

Objects of the Present Invention

It is an object of the present invention to provide a collapsible, portable bleacher chair that will help to isolate the occupant from the coldness and dampness problems commonly associated with bleacher seating.

However, the primary object of the invention is a structural design adapted as a clever and simple improvement of the standard plastic web strip aluminum lawn chair which converts it into a very stable stadium or bleacher chair with an integral seat and the ready capacity to take advantage of all of the manufacturing plants and distribution and marketing channels for the aluminum plastic web chair already in place.

It is a further object of the present invention to provide a collapsible, portable bleacher chair made from a novel and clever modification of an aluminum frame web

lawn chair that will provide back support, a seat, arm rests and an elevated footrest for an occupant.

However, the invention must be easily commercialized to be successful in the marketplace and mass marketable and thus it is a still further object of the present invention to provide a method of vending the bleacher chair of the present invention to those attending events for which bleacher seating is provided.

According to the present invention, there is provided a collapsible, portable bleacher chair for use with a bleacher structure having tiers of bleacher seating of a standard width, said bleacher chair comprising:

a chair portion comprising:

an elongated rod;

a seat portion comprising a peripheral frame forming two opposed sides and one unopposed side of a rectangle, and flexibly joined with said elongated rod to form the fourth side thereof;

a back portion comprising a peripheral frame forming two opposed sides and one unopposed side of a rectangle, and flexibly joined with said elongated rod to form the fourth side thereof; and,

a seating surface, comprising a tightly interwoven mesh of woven plastic straps, such that, straps connect the opposed sides of said seat portion frame, the opposed sides of said

back portion frame, and the unopposed side of said seat portion frame to the unopposed side of side back portion frame across said elongated rod;

two lateral arm members positioned outward of said chair portion, one on each side, with each rearward end of each arm member flexibly joined to the opposing sides of said back portion frame of said chair portion approximately at their midpoint;

a forward member comprising a frame forming two opposed sides and one unopposed side of a rectangle, with each distal end of said opposed sides farthest from said unopposed side flexibly joined to one of the lateral arm members in the proximity of the forward end thereof, and the opposed sides of said forward member flexibly joined approximately at their midpoint to the opposing sides of said seat portion frame in the proximity of the unopposed side of said seat portion frame; and,

a rearward member comprising a peripheral frame forming two opposed sides and one unopposed side of a rectangle, with each distal end of said opposed sides farthest from said unopposed side flexibly joined to one of the lateral arm members in the proximity of the midpoint of said lateral arm members, and the opposed sides of said rearward member flexibly joined at a point proximate to the unopposed side of said rearward member to the opposed sides of said seat portion frame in the proximity of the

distal ends of said opposed sides of said seat portion frame farthest from
the unopposed side of said seat portion frame member,
and wherein, the distance between the juncture of said forward member with said seat
portion frame and the juncture of said rearward member with said seat portion frame is
5 greater than the standard width of bleacher seating, such that said seat portion frame can
rest upon said bleacher seating,

and wherein, the portion of said rearward member extending beyond the junction
of said rearward member with said seat portion frame does not contact a bleacher
structure in a way, which would interfere with the placement of the seat portion frame
10 upon a bleacher seat.

According to another embodiment of the present novel invention, there is
provided a method for the rental of a collapsible, portable bleacher chair for events
having bleacher seating to a customer attending said event, which method comprises:
15 having a supply of collapsible, portable bleacher chairs at a convenient location
proximate to said event; providing a bleacher chair to a customer for the time period of
the event upon payment of a rental fee and provision of a security; and, returning said
security to said customer upon return of the bleacher chair.

In summary, the inventors have discovered that by modifying a standard
20 aluminum lawn chair of the type with plastic webbing at the rear support legs or rear U-
shaped support in a specified manner, i.e. shortening same to a specified length, namely
to **14 inches from the standard 20 inches** combined with placing and combining the
chair on top of a bleacher seat **having a width of approximately 12 inches or less,** and

a novel structure is created which provides a much desired elevated foot rest which elevates the feet of a user above the bleacher floor support by several inches which eliminates the need to extend the user's feet to the seat of the bleacher directly in front on the next tier down. This foot rest combined with the back support provided by the chair
5 provides a substantially increased level of ergonomic comfort not heretofore available in stadium or bleacher seating.

And, when the rear U-shaped leg support is shortened this change inherently creates an advantageous unobstructed space for the legs of the spectator directly behind the novel bleacher chair user.

That the foregoing and other features and advantages of the present invention are evident upon a prima facie application of the doctrine of equivalents will be appreciated as the novel invention is better understood from the detailed description of its novel aspects, as further disclosed herein, when taken in conjunction with the following
10 drawings, wherein:
15

Fig. 1 is a perspective view of the collapsible, portable bleacher chair of the present invention, in place on bleacher seating in a bleacher structure.

Fig. 2 is another view of the collapsible, portable bleacher chair of the present invention, showing greater detail of the rearward member in relation to a bleacher
20 structure.

Fig. 3 shows the collapsible, portable bleacher chair of the present invention in its collapsed state, for transport or storage.

Fig. 4 is a block diagram and flow chart illustration of the novel vending method for the novel bleacher chair.

Detailed Description of the Invention

Fig. 1 is a perspective view of the collapsible, portable bleacher chair **10** of the present invention. The bleacher chair **10** is intended for use with a bleacher structure **12** having tiers **14** of bleacher seating **16** of a standard width **18**. The bleacher chair **10** comprises a chair portion **20** that is constructed of a number of components, including an elongated rod **22**. The chair portion **20** further comprises a seat portion **24** comprising a peripheral frame **26** forming two opposed sides **28** and **30** and one unopposed side **32** of a rectangle, and flexibly joined with the elongated rod **22** to form the fourth side thereof.

The chair portion **20** further comprises a back portion **34** comprising a peripheral frame **36** forming two opposed sides **38** and **40** and one unopposed side **42** of a rectangle, and flexibly joined with the elongated rod **22** to form the fourth side thereof.

The chair portion **20** further comprises a seating surface **44**. This is typically a tightly interwoven mesh **46** of woven plastic straps **48**, but cloth fabric, in the form of strips or panels, can serve the same purpose. It is intended that this is done in such a way that straps **50** connect the opposed sides **28** and **30** of the seat portion **24** frame **26**. Straps **52** connect the opposed sides **38** and **40** of the back portion **34** frame **36**. Straps **54** connect the unopposed side **32** of the seat portion **24** frame **26** to the unopposed side **42** of back portion **34** frame **36** across the elongated rod **22**.

The bleacher chair **10** of the present invention further comprises two lateral arm members **56** and **58**. These arm members **56** and **58** are positioned outward of the chair

portion 20, one on each side, with each rearward end 60 and 62 of each arm member 56 and 58 and are flexibly joined to the opposing sides 40 and 42 of the back portion 34 frame 36 of the chair portion 20 approximately at their midpoints 64 and 66.

The bleacher chair 10 of the present invention further comprises a forward member 68 that comprises a frame 70 forming two opposed sides 72 and 74 and one unopposed side 76 of a rectangle. Each distal end 78 and 80 of the opposed sides 72 and 74 farthest from the unopposed side 76 are flexibly joined to one of the lateral arm members 56 and 58 in the proximity of the forward ends 82 and 84 thereof. Further, the opposed sides 72 and 74 of the forward member 68 are flexibly joined approximately at their midpoints 86 and 88 to the opposing sides 28 and 30 of the seat portion 24 frame 26 in the proximity of the unopposed side 32 of the seat portion 24 frame 26.

In addition, the bleacher chair 10 of the present invention further comprises a rearward member 90 comprising a frame 92 forming two opposed sides 94 and 96 and one unopposed side 98 of a rectangle. Each distal end 100 and 102 of the opposed sides 94 and 96 farthest from the unopposed side 98 are pivotably joined to one of the lateral arm members 56 and 58 in the proximity of the midpoints 104 and 106 of the lateral arm members 56 and 58, and the opposed sides 94 and 96 of the rearward member 90 are flexibly joined at a point proximate to the unopposed side 98 of the rearward member 90 to the opposed sides 28 and 30 of the seat portion 24 frame 26 in the proximity of the distal ends 108 and 110 of the opposed sides 28 and 30 of the seat portion 24 frame 26 farthest from the unopposed side 32 of the seat portion 24 frame 26.

This construction is intended to provide a distance 112 ,which is approximately an inch or two more than the width of the bleacher seat 16, between the juncture 114

of the forward member 68 with the seat portion 24 frame 26 and the juncture 116 of the rearward member 90 with the seat portion 24 frame 26 that is greater than the standard width 18 of bleacher seating 16. In this manner, the collapsible, portable bleacher chair 10 of the present invention is constructed such that the seat portion 24 frame 26 can rest upon the bleacher seating 16. Critical to this, however, is the requirement that the portion 118 of the rearward member 90 extending beyond the junction 116 of the rearward member 90 with the seat portion 24 frame 26 does not contact the bleacher structure 12 in a way which would interfere with the placement of the seat portion 24 tubular frame 26 upon the bleacher seating 16. The inventors have discovered that the optimum length for the sides 94 and 96 is in the range from about 14 inches to about 16 inches.

Fig. 2 is another view of the collapsible, portable bleacher chair 10 of the present invention, showing greater detail of the rearward member 90 in relation to a bleacher structure 12. In the embodiment shown in Fig. 2, the rearward member 90 frame 92 comprises separated pieces, with the opposed sides 94 and 96 formed of tubular aluminum, and the unopposed side 98 formed of a solid metal rod.

One skilled in the art will recognize the similarity between the collapsible, portable bleacher chair 10 of the present invention and a common folding lawn chair. However, such a folding lawn chair would not be suitable for the present purposes because the rear legs of a common lawn chair would interfere with the bleacher structure, and the seat portion would not be able to rest on the bleacher seating. There are forms of folding chairs with shorter rear legs, commonly referred to as beach chairs, but these constructions are intended for a more recumbent position on a relatively level surface, and would similarly not serve the present purpose.

The collapsible, portable bleacher chair **10** of the present invention can be constructed of numerous materials, including wood, solid metal, tubular metal, and the like. In the presently preferred embodiment of the invention, however, the elongated rod **22** is preferably constructed of solid metal, while the seat portion **24** frame **26**, the back portion **34** frame **36**, the forward member **68** frame **70**, and the rearward member **90** frame **92** are each constructed of an integrally formed piece of tubular aluminum.

Fig. 3 shows the novel collapsible, portable bleacher chair of the present invention in its collapsed state, for transport or storage.

According to another embodiment of the present novel invention, there is provided a method for the rental of the collapsible, portable bleacher chair **10** for events having bleacher seating to a customer attending said event, which method comprises having a supply of collapsible, portable bleacher chairs at a convenient location proximate to said event; providing a bleacher chair to a customer for the time period of the event upon payment of a rental fee and provision of a security; and, returning said security to said customer upon return of the bleacher chair.

The vending method illustrated in **Fig. 4** employs a portable personal computer **400** connected via a digital phone connection **402** to a credit card processing station or to an internet site for further processing. The portable computer **400** is enabled with a connected printer **404** to print out fee and deposit receipts for renters and an interconnected bar code reader **405** or scanner.

Initiation of the vending method first requires that each bleacher chair comprising an inventory or set be assigned a serial or identification number and subjected to a corresponding bar code labeling step **406**. Each identification number for each chair is

stored in the computer 400 as an inventory database. The inventory is made available in a secured vending area at a game or event. This step of chair storage 408 in an input and output area means that renter's pick up a bleacher chair and proceed past a check out or chair out and bar code reading step 410 where the bar code of the chair is scanned

5 followed by a step of scanning a credit card 412 of the renter of the chair. A standard electronic signature capture machine and step 414 having a screen and adapted writing pen generates a signature block for the renter's signature authorizing a charge for the rental fee and a deposit for the bleacher chair. The signature image capture machine is connected to the computer 400 along with the output of the credit card scanner via the scanning step 412. A next step 416 requires debiting of the credit card and associated
10 account for the rental fee and deposit. This debit is processed by the computer 400 via the digital phone connect 402.

The method further includes the step 420 of processing the return of a rented bleacher chair 10. In this step the returned bleacher chair is scanned by reading its bar
15 code identification strip. In a next step 422 the scanned data from the returned chair's bar code is compared to the stored rented chair database via the computer 400. Subsequently, the transaction for deposit amount is reversed and cancelled and in a next step 424 the deposit is released.

More specifically, the method of the invention first requires assembly of a group
20 of the chairs 10 made as specified herein and adapted to fit onto a standard bleacher structure such as, for example, bleachers manufactured and supplied by *Outdoor Aluminum Company of Geneva, Alabama* and described and shown on pgs. 16-17 of its 1999-2000 catalogue. The members of the group are each labeled or tagged with a

[illegible]

Parts List:

	10	Bleacher Chair
	12	Bleacher Structure
	14	Tiers
5	16	Bleacher Seating
	18	Width
	20	Chair Portion
	22	Elongated Rod
	24	Seat Portion
10	26	Peripheral Frame (of Seat Portion)
	28	Opposed Side (of Seat Portion Frame)
	30	Opposed Side (of Seat Portion Frame)
	32	Unopposed Side (of Seat Portion Frame)
	34	Back Portion
15	36	Peripheral Frame (of Back Portion)
	38	Opposed Side (of Back Portion Frame)
	40	Opposed Side (of Back Portion Frame)
	42	Unopposed Side (of Back Portion)
	44	Seating Surface
20	46	Interwoven Mesh
	48	Plastic Straps
	50	Straps (connecting 28 & 30)
	52	Straps (connecting 38 & 40)

98 Unopposed Side (of Rearward Member Frame)

100 Distal End (of Rearward Member)

102 Distal End (of Rearward Member)

104 Midpoint (Opposed Side 94 of Rearward Member)

106 Midpoint (Opposed Side 96 of Rearward Member)

5 108 Distal End (of Opposed Side 28 of Seat Portion 24)

110 Distal End (of Opposed Side 30 of Seat Portion 24)

112 Distance

114 Junction (of Forward Member 68 w/ Seat Portion 24)

116 Junction (of Rearward Member 90 w/ Seat Portion 24)

10 118 Portion

400 portable computer

402 digital phone and connect

404 printer

405 bar code reader

15 406 bar code labeled inventory

408 chair storage

410 chair out bar code reading step

412 credit card scanning step

414 electronic signature capture step

20 416 credit debiting step

420 chair in bar code reading step

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422 return verification step

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424 deposit release step

What Is Claimed Is:

1. In combination with a bleacher structure having tiers of bleacher seating planks of a width W, a collapsible portable disengageable bleacher chair with a plurality of portions including a seat portion having a top and a bottom, said bottom of said seat portion being the only portion of said chair in contact with said bleacher structure, said bottom being juxtaposed on top of one of said seating planks of the bleacher structure, said bleacher chair comprising:

a chair portion comprising:

an elongated rod;

a seat portion comprising a peripheral frame forming two opposed sides and one unopposed side of a rectangle, and flexibly joined with said elongated rod to form the fourth side thereof;

a back portion comprising a peripheral frame forming two opposed sides and one unopposed side of a rectangle, and flexibly joined with said elongated rod to form the fourth side thereof; and,

a seating surface;

two lateral arm members positioned outward of said chair portion, one on each side, with each rearward end of each arm member joined to the opposing sides of said back portion frame of said chair portion approximately at their midpoint;

a forward member comprising a frame forming two opposed forward vertically oriented and forward slanted sides each having a proximal end and a distal end, each having a length F and one unopposed side of a rectangle, with each proximal end of said opposed sides closest to said unopposed side joined to one of the lateral arm members in the proximity of the forward end thereof, with each distal end of said opposed sides farthest from said unopposed side joined by a horizontal bar, and the opposed sides of said forward member joined approximately at their midpoint to the opposing sides of said seat portion frame in the proximity of the unopposed side of said seat portion frame; and,

a rearward member comprising a frame forming two opposed rearward vertically oriented and rearward slanted sides each having a length R and one unopposed side of a rectangle, with each distal end of said opposed sides farthest from said unopposed side joined to one of the lateral arm members in the proximity of the midpoint of said lateral arm members, and the opposite sides of said rearward member joined at a point proximate to the unopposed side of said rearward member to the opposing sides of said seat portion frame in the proximity of the distal ends of said opposed sides of said seat portion frame member farthest from the unopposed side of said seat portion frame member,

and wherein, a distance D between the juncture of said forward member with said

seat portion frame and the juncture of said rearward member with said seat portion frame is greater than the width W of the bleacher seat plank, said seat portion frame resting upon the bleacher seat plank and said bleacher chair supported solely by said bleacher seat plank,

and wherein R is approximately one-third less than F, said forward member comprising the frame forming two opposed forward vertically oriented and forward slanted sides each having the length F, the length F representing the length of said forward member, said rearward member comprising the frame forming two opposed rearward vertically oriented and rearward slanted sides each having a length R, the length R representing the length of said rearward member, and wherein the horizontal bar provides a suspended foot rest behind a bleacher seating plank in front of the bleacher seating plank on which the bleacher chair rests .

2. The bleacher seat of claim 1 wherein R and F bear a certain ratio relationship to each other, the ratio of R to F being approximately two thirds or approximately 0.667.

3. The bleacher seat of claim 1 wherein the rearward member is constructed of separate pieces in which at least the opposing sides are tubular aluminum.

4. The bleacher seat of claim 1 in which the seat surface comprises a tightly interwoven mesh of woven plastic straps, such that, straps connect the opposed sides of said seat portion frame, the opposed sides of said back portion frame, and the unopposed side of said seat portion frame to the unopposed side of side back portion frame across said elongated rod.

5. The bleacher seat of claim 1 in which the seat surface comprises a tightly interwoven mesh of fabric straps, such that, straps connect the opposed sides of said seat

portion frame, the opposed sides of said back portion frame, and the unopposed side of said seat portion frame to the unopposed side of side back portion frame across said elongated rod.

5 6. The bleacher seat of claim 1 in which the seat surface comprises a tightly interwoven mesh of fabric panels, such that, at least one panel connects the opposed sides of said seat portion frame, at least one panel connects the opposed sides of said back portion frame, and at least one panel connects the unopposed side of said seat portion frame to the unopposed side of side back portion frame across said elongated rod.

10 7. The bleacher seat of claim 1 wherein the seat portion frame is constructed of an integral piece of tubular aluminum.

15 8. The bleacher seat of claim 1 wherein the back portion frame is constructed of an integral piece of tubular aluminum.

9. The bleacher seat of claim 1 wherein the forward member is constructed of an integral piece of tubular aluminum.

20 10. The bleacher seat of claim 1 wherein the elongated rod is constructed of metal.

11. A method for the rental of a bleacher chair for events having bleacher seating to a customer attending said event, which method comprises:

having a supply of bleacher chairs at a convenient location proximate to said event, each said bleacher chair comprising:

a chair portion comprising:

an elongated rod;

a seat portion comprising a peripheral frame forming two opposed sides and one unopposed side of a rectangle, and flexibly joined with said elongated rod to form the fourth side thereof;

a back portion comprising a peripheral frame forming two opposed sides and one unopposed side of a rectangle, and flexibly joined with said elongated rod to form the fourth side thereof; and,

a seating surface;

two lateral arm members positioned outward of said chair portion, one on each side, with each rearward end of each arm member joined to the opposing sides of said back portion frame of said chair portion approximately at their midpoint;

a forward member comprising an aluminum frame forming two opposed sides and one unopposed side of a rectangle, with each distal end of said opposed sides farthest from said unopposed side joined to one of the lateral arm members in the proximity of the forward end thereof, and the opposed sides of said forward member joined approximately at their

midpoint to the opposed sides of said seat portion frame in the proximity of the unopposed side of said seat portion frame; and,

a rearward member comprising a frame forming two opposed sides and one unopposed side of a rectangle, with each distal end of said opposed sides farthest from said unopposed side joined to one of the lateral arm members in the proximity of the midpoint of said lateral arm members, and the opposed sides of said rearward member joined at a point proximate to the unopposed side of said rearward member to the opposed sides of said seat portion frame in the proximity of the distal ends of said opposed sides of said seat portion frame member farthest from the unopposed side of said seat portion frame,

and wherein, the distance between the juncture of said forward member with said seat portion frame and the juncture of said rearward member with said seat portion frame is greater than the standard width of bleacher seating, such that said seat portion frame can rest upon said bleacher seating,

and wherein, the portion of said rearward member extending beyond the junction of said rearward member with said seat portion frame does not contact said bleacher structure in a way which would interfere with the placement of the seat portion frame upon said bleacher seating;

providing a bleacher chair to a customer for the time period of the event upon payment of a rental fee and provision of a security; and,
returning said security to said customer upon return of the bleacher chair.

12. In a collapsible, portable lawn chair, said chair comprising:

a chair portion comprising:

an elongated rod;

5 a seat portion comprising a peripheral frame forming two opposed sides and one unopposed side of a rectangle, and flexibly joined with said elongated rod to form the fourth side thereof;

10 a back portion comprising a peripheral frame forming two opposed sides and one unopposed side of a rectangle, and flexibly joined with said elongated rod to form the fourth side thereof; and, a seating surface;

15 two lateral arm members positioned outward of said chair portion, one on each side, with each rearward end of each arm member joined to the opposing sides of said back portion frame of said chair portion approximately at their midpoint;

20 a forward member comprising a frame forming two opposed sides and one unopposed side of a rectangle, with each distal end of said opposed sides farthest from said unopposed side joined to one of the lateral arm members in the proximity of the forward end thereof, and the opposed sides of said forward member joined approximately at their midpoint to the opposing sides of said seat portion frame in the proximity of the unopposed side of said seat portion frame; and,

a rearward member comprising a frame forming two opposed sides and one unopposed side of a rectangle, with each distal end of said opposed sides farthest

from said unopposed side joined to one of the lateral arm members in the proximity of the midpoint of said lateral arm members, and the opposite sides of said rearward member joined at a point proximate to the unopposed side of said rearward member to the opposing sides of said seat portion frame in the proximity of the distal ends of said opposed sides of said seat portion frame member farthest from the unopposed side of said seat portion frame member, and wherein, the distance between the juncture of said forward member with said seat portion frame and the juncture of said rearward member with said seat portion frame is greater than a width of a bleacher seat and bleacher support structure, an improvement comprising said seat portion frame juxtaposed upon the bleacher seat, and wherein, the portion of said rearward member extending beyond the junction of said rearward member with said seat portion frame is substantially shortened and avoids contact with the bleacher support structure and wherein said seat portion frame juxtaposed upon the bleacher seat converts the bottom horizontal bar of said forward member into an elevated foot rest.

13. A method for the rental of a portable bleacher chair for events having bleacher seating to a customer attending said event, which method comprises:

(a) providing an inventory of bleacher chairs at a location proximate to said event, each said bleacher chair comprising a unique identification

means for uniquely identifying each said bleacher chair, said identification means being laser scannable into a computer;

(b) providing a computer means for digitally storing the unique identification means for each bleacher chair;

(c) providing a credit card scanning means for scanning the renter's credit card and obtaining a set of data therefrom when the renter checks out a bleacher chair, the computer means matching the data to the unique identification means for the bleacher chair rented;

(d) the computer means further having a signature capture means for electronically capturing said renter's signature authorizing a transaction, the computer means further having a wireless digital phone connection means for sending and receiving credit card data and a printing means for printing a receipt of said transaction;

(e) providing a means for electronically charging and releasing a monetary deposit for said bleacher chair rental; and,

(f) releasing the deposit by scanning the unique identification means associated with said bleacher chair upon its return to inventory.

14. The method of claim 13 wherein the unique identification means is a bar code attached to the bleacher chair, the bar code being a unique digital number.

15. The method of claim 14 wherein the scanning means is a laser bar code reader.

5

Abstract

A bleacher chair for use with a bleacher structure having tiers of bleacher seating of a standard width, said bleacher chair comprising a chair portion, two lateral arm members, a forward member, and a rearward member and wherein the chair portion can rest upon a bleacher seat, and the rearward member does not contact the bleacher structure in a way which would interfere with the placement of the chair portion upon a bleacher seat. A method for vending the bleacher chair of the present invention to those attending events with bleacher seating is also provided.

10

15

FIG. 1

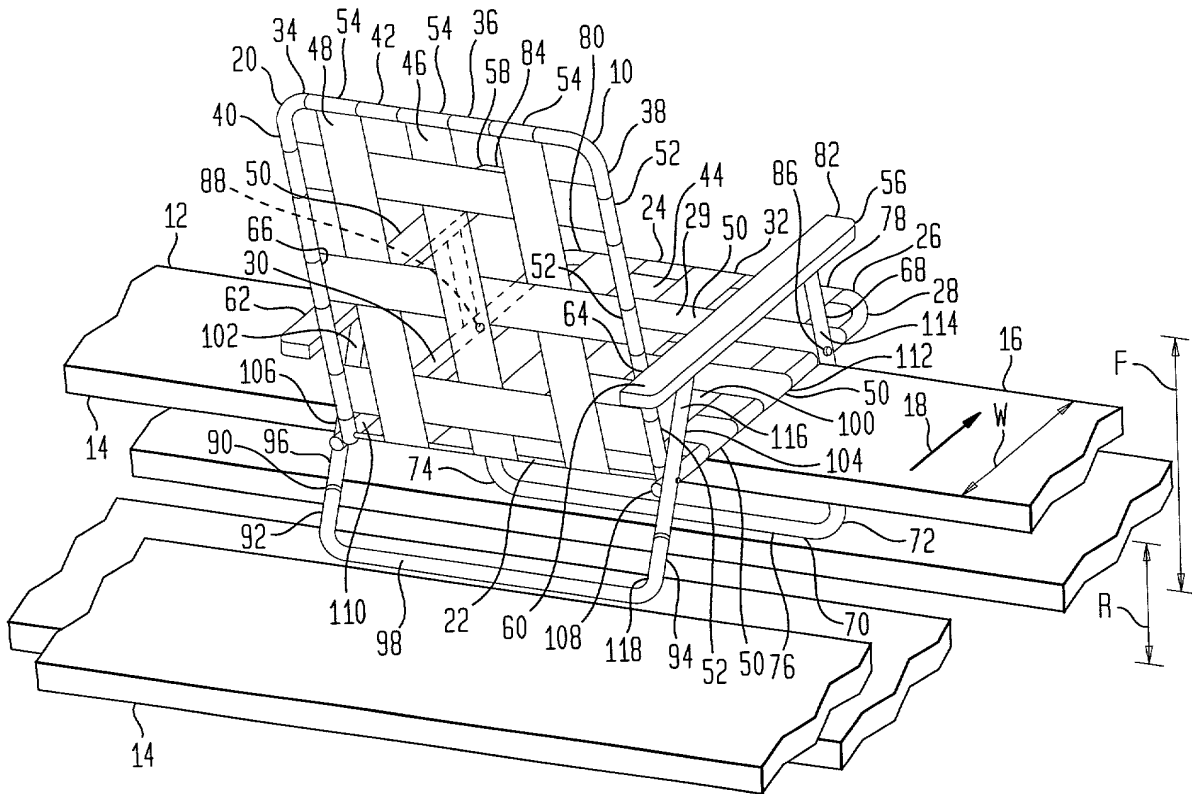


FIG. 2

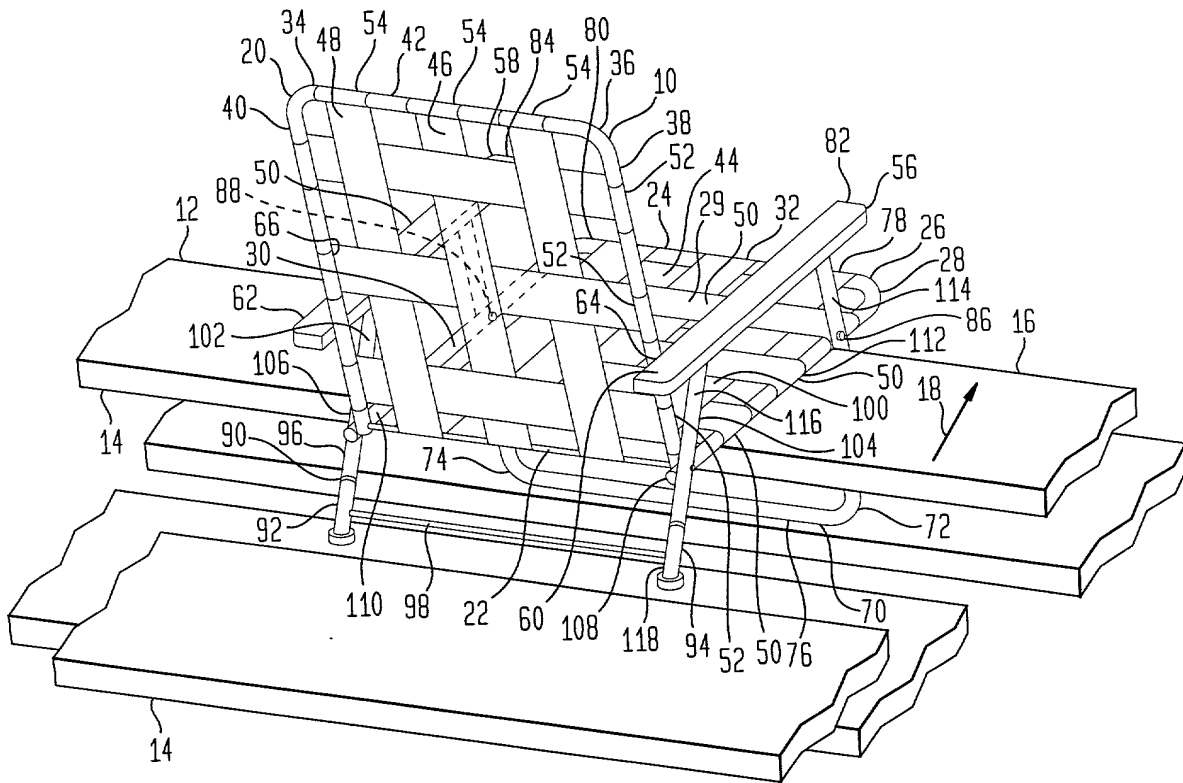


FIG. 3

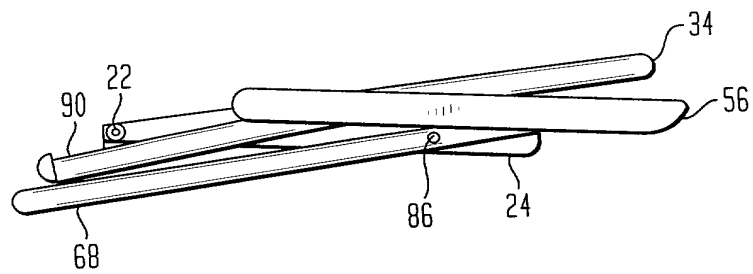
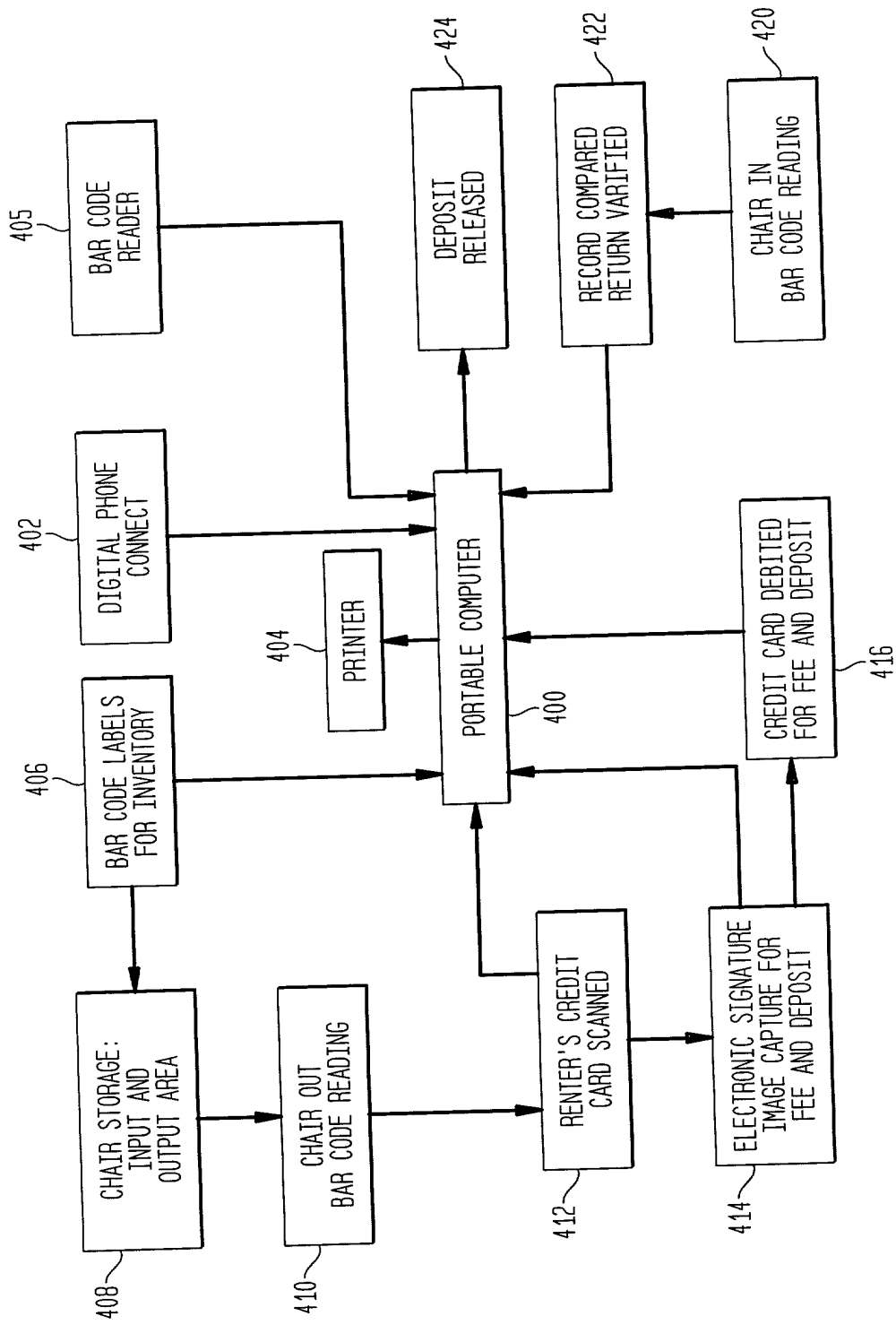


FIG. 4



COMBINED DECLARATION AND POWER OF ATTORNEY IN ORIGINAL
APPLICATION

As the below named inventors, we hereby declare that:

Our residence, post office address and citizenship are as stated below next to our
names:
that

We believe that we are the original and first inventors of the invention entitled:
IMPROVED BLEACHER CHAIR AND VENDING SYSTEM described and claimed in
the attached application including the claims, that we have reviewed, read, and
understood the contents of the application, drawing, and amendments, that we do not
know and do not believe the same was ever known or used in the United States of
America before our invention thereof, or patented or described in any printed publication
in this country before our invention thereof or more than one year prior to this
application, that same was not in public use or on sale in the United States of America
more than one year prior to this application, that the invention has not been patented or
made the subject of any inventor's certificate issued before the date of this application in
any country foreign to the United States of America on an application filed by us or our
legal representatives or assigns more than twelve months prior to this application, that we
acknowledge our duty to disclose information of which we are aware which is material to
the examination of this application in accordance with CFR 1.56 (a), and that no
application for patent or inventor's certificate on this invention has been filed in any
country foreign to the United States of America prior to this application by us or our legal
representatives or assigns.

1. 2000-2001 2. 2001-2002 3. 2002-2003 4. 2003-2004 5. 2004-2005 6. 2005-2006 7. 2006-2007 8. 2007-2008 9. 2008-2009 10. 2009-2010 11. 2010-2011 12. 2011-2012 13. 2012-2013 14. 2013-2014 15. 2014-2015 16. 2015-2016 17. 2016-2017 18. 2017-2018 19. 2018-2019 20. 2019-2020 21. 2020-2021 22. 2021-2022 23. 2022-2023 24. 2023-2024 25. 2024-2025 26. 2025-2026 27. 2026-2027 28. 2027-2028 29. 2028-2029 30. 2029-2030 31. 2030-2031 32. 2031-2032 33. 2032-2033 34. 2033-2034 35. 2034-2035 36. 2035-2036 37. 2036-2037 38. 2037-2038 39. 2038-2039 40. 2039-2040 41. 2040-2041 42. 2041-2042 43. 2042-2043 44. 2043-2044 45. 2044-2045 46. 2045-2046 47. 2046-2047 48. 2047-2048 49. 2048-2049 50. 2049-2050 51. 2050-2051 52. 2051-2052 53. 2052-2053 54. 2053-2054 55. 2054-2055 56. 2055-2056 57. 2056-2057 58. 2057-2058 59. 2058-2059 60. 2059-2060 61. 2060-2061 62. 2061-2062 63. 2062-2063 64. 2063-2064 65. 2064-2065 66. 2065-2066 67. 2066-2067 68. 2067-2068 69. 2068-2069 70. 2069-2070 71. 2070-2071 72. 2071-2072 73. 2072-2073 74. 2073-2074 75. 2074-2075 76. 2075-2076 77. 2076-2077 78. 2077-2078 79. 2078-2079 80. 2079-2080 81. 2080-2081 82. 2081-2082 83. 2082-2083 84. 2083-2084 85. 2084-2085 86. 2085-2086 87. 2086-2087 88. 2087-2088 89. 2088-2089 90. 2089-2090 91. 2090-2091 92. 2091-2092 93. 2092-2093 94. 2093-2094 95. 2094-2095 96. 2095-2096 97. 2096-2097 98. 2097-2098 99. 2098-2099 100. 2099-2100 101. 2100-2101 102. 2101-2102 103. 2102-2103 104. 2103-2104 105. 2104-2105 106. 2105-2106 107. 2106-2107 108. 2107-2108 109. 2108-2109 110. 2109-2110 111. 2110-2111 112. 2111-2112 113. 2112-2113 114. 2113-2114 115. 2114-2115 116. 2115-2116 117. 2116-2117 118. 2117-2118 119. 2118-2119 120. 2119-2120 121. 2120-2121 122. 2121-2122 123. 2122-2123 124. 2123-2124 125. 2124-2125 126. 2125-2126 127. 2126-2127 128. 2127-2128 129. 2128-2129 130. 2129-2130 131. 2130-2131 132. 2131-2132 133. 2132-2133 134. 2133-2134 135. 2134-2135 136. 2135-2136 137. 2136-2137 138. 2137-2138 139. 2138-2139 140. 2139-2140 141. 2140-2141 142. 2141-2142 143. 2142-2143 144. 2143-2144 145. 2144-2145 146. 2145-2146 147. 2146-2147 148. 2147-2148 149. 2148-2149 150. 2149-2150 151. 2150-2151 152. 2151-2152 153. 2152-2153 154. 2153-2154 155. 2154-2155 156. 2155-2156 157. 2156-2157 158. 2157-2158 159. 2158-2159 160. 2159-2160 161. 2160-2161 162. 2161-2162 163. 2162-2163 164. 2163-2164 165. 2164-2165 166. 2165-2166 167. 2166-2167 168. 2167-2168 169. 2168-2169 170. 2169-2170 171. 2170-2171 172. 2171-2172 173. 2172-2173 174. 2173-2174 175. 2174-2175 176. 2175-2176 177. 2176-2177 178. 2177-2178 179. 2178-2179 180. 2179-2180 181. 2180-2181 182. 2181-2182 183. 2182-2183 184. 2183-2184 185. 2184-2185 186. 2185-2186 187. 2186-2187 188. 2187-2188 189. 2188-2189 190. 2189-2190 191. 2190-2191 192. 2191-2192 193. 2192-2193 194. 2193-2194 195. 2194-2195 196. 2195-2196 197. 2196-2197 198. 2197-2198 199. 2198-2199 200. 2199-2200 201. 2200-2201 202. 2201-2202 203. 2202-2203 204. 2203-2204 205. 2204-2205 206. 2205-2206 207. 2206-2207 208. 2207-2208 209. 2208-2209 210. 2209-2210 211. 2210-2211 212. 2211-2212 213. 2212-2213 214. 2213-2214 215. 2214-2215 216. 2215-2216 217. 2216-2217 218. 2217-2218 219. 2218-2219 220. 2219-2220 221.	
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Trenton, New Jersey 08618

CITIZENSHIP: United States of America